1   1. A method of displaying alert information for objects in a network, comprising:

2   storing performance information for the network objects at predetermined time

3   intervals;

4   determining at least one potential root cause of one or more triggers in the

5   network; and

6   displaying a topographical network map including network objects associated

7   with at least one of the one or more triggers.

8

9   2. The method according to claim 1, further including associating a first visual indicator

10   with one or more of the displayed network objects associated with the at least one

11   potential root cause.

12

13   3. The method according to claim 1, further including associating a second visual

14   indicator with one or more objects that are identified as the potential root cause objects.

15

16   4. The method according to claim 3, wherein the second visual indicator is associated

17   with objects at a device level.

18

19   5. The method according to claim 1, further including displaying a first region for a first

20   type of network object and a second region for a second type of network object.

21

22   6. The method according to claim 5, further including selecting the first and second

23   regions from one or more of hosts, connectivity devices, and storage devices.

24

25   7. The method according to claim 6, further including visually identifying a first one of

26   the plurality of cells that corresponds to configuration and trigger information for the

27   map.

1 8. The method according to claim 1, wherein certain ones of the displayed network

2 objects are expandable to show devices associated therewith.

3

4 9. The method according to claim 1, further including displaying a list of devices

5 associated with a selected one of the displayed network objects.

6

7 10. The method according to claim 9, further including displaying performance data for

8 one or more of the listed devices.

9

10 11. The method according to claim 10, further including visually identifying a first one

11 of the listed devices as a root cause.

12

13 12. The method according to claim 11, further including identifying the first one of the

14 listed devices as the root cause based upon exceeding a threshold for the performance

15 data metric.

16

17 13. The method according to claim 9, further including adding a selected one of the

18 listed devices to the map.

19

20 14. The method according to claim 1, further including displaying expanded views of

21 selected ones of the displayed objects.

22

23 15. The method according to claim 14, further including displaying expanded views of

24 selected ones of the displayed objects including objects not associated with the triggers.

25

26 16. The method according to claim 1, further including displaying a hierarchical view of

27 network objects.

28

29 17. The method according to claim 1, further including displaying a graph of

30 performance data of a first metric for a first one of the displayed objects.

1   18. The method according to claim 17, further including displaying a threshold for the
2   first metric.

3

4   19. The method according to claim 18, further including adjusting the threshold based
5   upon user instruction via graphical user interaction.

6

7   20. The method according to claim 17, further including displaying the performance data
8   over time.

9

10   21. The method according to claim 17, further including displaying the performance data
11   for a period of time selected by a user.

12

13   22. The method according to claim 17, further including moving a slider to a desired
14   time and synchronizing the map to a configuration at the desired time.

15

16   23. The method according to claim 17, further including displaying statistical bands
17   about the performance data.

18

19   24. The method according to claim 23, wherein the statistical bands are defined by a
20   statistical relationship to historical data.

21

22   25. The method according to claim 24, further including receiving a user selection of a
23   time period for the historical data.

24

25   26. The method according to claim 23, further including defining the statistical bands by
26   using standard deviations from historical data.

27

28   27. The method according to claim 26, further including defining the statistical bands as
29   about 1.5 standard deviations from the historical data.

1   28. The method according to claim 26, further including defining the statistical bands as

2   about 1.5 standard deviations plus or minus about ten percent.

3

4   29. The method according to claim 27, wherein the statistical bands are displayed for

5   performance data of writes per second for a device.

6

7   30. The method according to claim 1, further including setting a threshold as a logical

8   combination of a plurality of metrics.

9

10   31. A computer system, comprising:

11   a processor;

12   a display coupled to the processor; and

13   a memory coupled to the processor, the memory including program instructions

14   for enabling displaying alert information for objects in a network by:

15   storing performance information for the network objects at predetermined time

16   intervals;

17   determining at least one potential root cause of one or more alerts in the network;

18   and

19   displaying a topographical network map including network objects associated

20   with at least one of the one or more alerts.

21

22   32. The computer system according to claim 31, further including associating a first

23   visual indicator with one or more of the displayed network objects associated with the at

24   least one potential root cause.

25

26   33. The computer system according to claim 31, further including associating a second

27   visual indicator with one or more objects that are identified as the potential root cause

28   objects.

29

1   34.   The computer system according to claim 33, wherein the second visual indicator is

2   associated with objects at a device level.

3

4   35.   The computer system according to claim 31, further including displaying a first

5   region for a first type of network object and a second region for a second type of network

6   object.

7

8   36.   The computer system according to claim 31, further including displaying a plurality

9   of cells corresponding to respective periods of time.

10

11   37.   The computer system according to claim 36, further including visually identifying a

12   first one of the plurality of cells that corresponds to configuration and alert information

13   for the map.

14

15   38.   The computer system according to claim 31, wherein certain ones of the displayed

16   network objects are expandable to show devices associated therewith.

17

18   39.   The computer system according to claim 31, further including displaying a list of

19   devices associated with a selected one of the displayed network objects.

20

21   40.   The computer system according to claim 39, further including displaying

22   performance data for one or more of the listed devices.

23

24   41.   The computer system according to claim 40, further including identifying a first one

25   of the listed devices as a root cause.

26

27   42.   The computer system according to claim 39, further including adding a selected one

28   of the listed devices to the map.

29

1   43.   The computer system according to claim 31, further including displaying a graph of

2   performance data of a first metric for a first one of the displayed objects.

3   44.   The computer system according to claim 43, further including displaying a threshold

4   for the first metric.

5

6   45.   The computer system according to claim 44, further including relocating the

7   threshold based upon user instruction via graphical user interaction.

8

9   46.   The computer system according to claim 43, further including displaying a graph of

10 performance data for a metric selected by a user.

11

12 47.   The computer system according to claim 46, further including displaying the

13 performance data over time.

14

15 48.   The computer system according to claim 43, further including displaying the

16 performance data for a period of time selected by a user.

17

18 49.   The computer system according to claim 43, further including moving a slider to a

19 desired time and synchronizing the map to a configuration at the desired time.

20

21 50.   The computer system according to claim 43, further including displaying statistical

22 bands about the performance data.

23

24 51.   The computer system according to claim 50, wherein the statistical bands are defined

25 by a statistical relationship to historical data.

26

27 52.   The computer system according to claim 50, further including defining the statistical

28 bands by using standard deviations from historical data.

29

1   53. The computer system according to claim 50, further including defining the statistical

2   bands as about 1.5 standard deviations plus or minus about ten percent.

3   54. The computer system according to claim 31, further including setting a threshold as

4   a logical combination of a plurality of metrics.

5

6   55. An article, comprising:

7   a storage medium having stored instructions that when executed by a machine

8   result in the following:

9   storing performance information for objects.in a network.at predetermined time

10 intervals;

11   determining at least one potential root cause of one or more alerts in the network;

12 and

13   displaying a topographical network map including network objects associated

14 with the one or more alerts.

15

16 56. The article according to claim 55, further including displaying a first region for a

17 first type of network object and a second region for a second type of network object.

18

19 57. The article according to claim 55, further including displaying a list of devices

20 associated with a selected one of the displayed network objects.

21

22 58. The article according to claim 57, further including displaying performance data for

23 one or more of the listed devices.

24

25 59. The article according to claim 58, further including identifying a first one of the

26 listed devices as a root cause.

27

28 60. The article according to claim 55, further including displaying a graph of

29 performance data of a first metric for a first one of the displayed objects.

30

1   61.   The article according to claim 60, further including moving a slider to a desired time

2   and synchronizing the map to a configuration at the desired time.

3

4   62.   The article according to claim 55, further including displaying statistical bands about

5   the performance data.

6

7   63.   The article according to claim 55, further including setting a threshold as a logical

8   combination of a plurality of metrics.